No. 97-1709

In the Supreme Court of the United States

OCTOBER TERM, 1998

KUMHO TIRE COMPANY, LTD., KUMHO U.S.A., INC., and HERCULES TIRE & RUBBER COMPANY, INC., *Petitioners*

v.

PATRICK CARMICHAEL, AN INDIVIDUAL AND FATHER AND NEXT OF KIN TO PATRICK CARMICHAEL, JR., A MINOR, LUZVIMINDA CARMICHAEL, AN INDIVIDUAL AND MOTHER AND NEXT FRIEND OF CARINA HORN, A MINOR, AND ADMINISTRATRIX OF THE ESTATE OF JANICE HORN, CARINA HORN, A MINOR, LEONA CARMICHAEL, SHAMEELA CARMICHAEL, AND NATIMAH CARMICHAEL, *Respondents*

On Writ Of Certiorari
To The United States Court Of Appeals
For The Eleventh Circuit

REPLY BRIEF FOR PETITIONERS

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Respondents make *no effort* to defend the two erroneous propositions of law on which the judgment of the court of appeals rests: a trial judge is barred from considering *any* of the reliability factors set forth in *Daubert* v. *Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), if an expert either (1) purports to rely on "experience" as the basis for his testimony, or (2) offers "technical" or "specialized" (as opposed to "scientific") testimony. Respondents seek to persuade this Court to affirm the Eleventh Circuit on other grounds or, if this Court reverses, to remand to the district court (rather than affirm that court's decision). Respondents offer a mélange of unpersuasive arguments not made below or otherwise not properly before the Court. They also attack arguments we never made and imaginary "holdings" of the courts below. The Eleventh Circuit's judgment should be reversed, and the district court's manifestly correct decision to exclude Carlson's testimony affirmed.

A. Respondents Agree That All Expert Testimony Must Be Screened For Reliability And They Offer No Defense Of The Eleventh Circuit's Reasoning

1. Respondents agree that federal trial courts have the "gatekeeping" obligation to ensure that *all* expert testimony is reliable and relevant. Resp. Br. 15, 23-24, 33 n.32; accord U.S. Br. 10-11, 13 & n.1. Because there has been confusion on this question in the lower courts, *e.g.*, *Tamarin* v. *Adam Caterers, Inc.*, 13 F.3d 51, 53 (2d Cir. 1993), and because the Eleventh Circuit's decision is not a model of clarity (see Resp. Br. 21 n.20), this Court should make unmistakably clear that what respondents call the "reliability threshold" (*id.* at 15) must be satisfied for *all* expert testimony.

2. Respondents do not defend the Eleventh Circuit's ruling that the district court erred in considering any of the *Daubert* reliability factors because Carlson purported to base his opinion on his "experience and skill with failed tires." JA 100-01. As we explained (Pet. Br. 27-32), the Eleventh Circuit erred in holding that an expert's *mere invocation* of his professional "experience" suffices to bypass an evaluation for reliability under the *Daubert* factors. That approach would eviscerate Rule 702 and would lead to absurd results, since *any* expert can say that his opinion rests on "experience" in the broadest sense of that term. See Pet. Br. 29-31. Even if some or all of the *Daubert* factors need not be applied when an expert witness eschews the use of any defined meth-

odology and *in fact* relies only on "experience" in the narrower sense of past firsthand observation, that would not help respondents: Carlson indisputably relied on a methodology that can and should be evaluated for reliability. JA 29, 32-37.

Respondents even admit (at 35) that the court of appeals' "line drawing over the bases for the expert testimony" was "unproductive." Accord U.S. Br. 14 n.2. Moreover, by arguing (at 16) that the reliability of all experts must be evaluated by examining "the methodologies and principles used in [the relevant] field" of expertise (an argument we will address later), respondents concede that expert testimony can never be admitted solely on the strength of an expert's *ipse dixit* that his opinion is based on "experience." *General Electric Co.* v. *Joiner*, 118 S. Ct. 512, 519 (1997).[1]

Respondents argue (at 36-38) that "universal" application of *all* of the *Daubert* reliability factors to *every* expert who claims to rely on experience might lead to the exclusion of some testimony that until now has been admitted in some courts. This argument focuses almost exclusively on experts who rely on "experience" in

[1] Respondents do say (Br. 35 n.33) that the "Eleventh Circuit's view that Carlson's opinions are grounded in experience * * * is more persuasive than [the district court's] * * * characterization of his opinions as scientific in nature." But, if there is no "experience" exception to the *Daubert* factors (as respondents concede), then there is no reason to consider whether Carlson falls within such an exception. In any event, the court of appeals did not conclude that Carlson's opinion was in fact rooted in his experience; rather, it held that an "experience" exception to *Daubert* applied solely because Carlson *invoked* experience as the basis for his testimony. See JA 102; Pet. Br. 28-32. Finally, the Eleventh Circuit's characterization is *not* more persuasive than the district court's. The district court correctly found that tire failure analysis involves the "application of scientific concepts involved in physics, chemistry, and mechanical engineering." JA 42-43; see Pet. Br. 46-47. When properly conducted, tire failure analysis employs a reasoning process essentially identical to the scientific method. Respondents fail to respond to this point, which was persuasively elaborated on by various *amici*, including the National Academy of Engineering and other prominent groups of engineers. See Nat'l Acad. Eng'g Br. 6-18; Br. of Allen *et al.*, at 11-12; Br. of Bobo *et al.*, at 11, 16-17, 21-25; Br. of Rubber Mfrs. Ass'n, at 16-19, 23-27.

the narrow sense of *past firsthand observation*. See Pet. Br. 28-30. We answered respondents' argument in our opening brief (at 28-29): whether some or all of "the *Daubert* factors might not apply to certain types of experience-based expert testimony" "need not be decided in this case," since *Carlson* relied on a detailed methodology appropriately evaluated for reliability under *Daubert*.

3. Respondents likewise abandon the Eleventh Circuit's rationale that a trial judge may not consider *any* of the *Daubert* reliability factors if an expert offers "technical" or "specialized" (as opposed to "scientific") testimony. Resp. Br. 35 n.33; see also *id.* at 34. There is thus no need for this Court to reach our fall-back argument (Pet. Br. 45-47) that the district court correctly characterized Carlson's testimony as based on "scientific" knowledge.

B. Respondents' Arguments Rest On Misinterpretations Of The Lower Courts' Decisions And Of Our Submissions

Unable to defend the Eleventh Circuit's actual holdings, respondents (like their *amici*) attack rationales that no court below ever endorsed and counter arguments that we never made.

1. Again and again, respondents intone that the district court applied the *Daubert* reliability criteria "automatically and exclusively," based on the mistaken belief that it "must" examine those — and only those — indicia of reliability in deciding whether to admit Carlson's testimony. Resp. Br. 12, 13, 19, 20, 21, 25, 28 n.26, 32, 33; see also *id.* at 2 (criticizing alleged "assumption" that the *Daubert* factors are appropriate for "all experts"). They must hope that, by dint of sheer repetition, this Court will accept the truth of their mantra. In fact, however, the district court neither "automatically" nor "exclusively" applied the *Daubert* reliability factors.[2]

Only by ignoring the district court's opinion on reconsideration (JA 95-105) can respondents characterize that court's decision as

[2] Respondents seize on the district court's statement, in its original opinion, that, "[i]n assessing whether proffered scientific testimony is admissible, a court *must* consider such factors as" the reliability considerations set forth in *Daubert*. JA 37 (emphasis added). The district court did not say that it "must" consider only the *Daubert* factors; it said that a court "must consider *such factors as*" the *Daubert* considerations.

relying on an "automatic" or "exclusive" application of the *Daubert* factors. In that opinion, the court expressly rejected respondents' contention (see JA 59-62) that it had applied the *Daubert* factors inflexibly to the exclusion of all other pertinent considerations. JA 91. "[T]he list of criteria propounded in *Daubert*," the court explained, "was intended neither to be exhaustive nor to apply in every case." JA 91. As the passage quoted in our opening brief demonstrates, the district court stated unequivocally that it had applied the *Daubert* factors to Carlson's testimony because they fit and because respondents had failed to identify any other factors that weighed in favor of admissibility. JA 91 (quoted in Pet. Br. 14).

As we have demonstrated (Pet. Br. 48-50), the district court also relied on facts and considerations beyond the *Daubert* factors in excluding Carlson's testimony. Accord U.S. Br. 8. For that reason as well, respondents' claim that the district court applied the *Daubert* factors "exclusively" is refuted by the record.

Respondents also insist that the district judge "assumed" that Carlson's testimony was rooted in scientific knowledge. Resp. Br. 33; see *id.* at 19, 28, 34, 35 n.33. That is not so. The court *determined*, "[a]fter careful consideration" and based on the record before it, that Carlson's testimony involved "an application of scientific concepts involved in physics, chemistry, and mechanical engineering" and thus was "grounded in some scientific foundation." JA 26, 42-43. That is a *finding*, not an assumption.[3]

2. Having misdescribed the district court's holding, respondents mischaracterize the Eleventh Circuit's reversal as based on a disagreement with a supposedly "wooden" and "automatic"

[3] Respondents complain that the district court's finding rested on a weak "empirical basis." Resp. Br. 28. But respondents were free to submit evidence that tire failure analysis is *not* scientific in nature; they failed to do so. See JA 89 (respondents "have offered the Court no basis for reconsidering" its determination that Carlson's testimony was based on scientific knowledge); see also JA 55. And respondents' insistence on a more extensive evidentiary basis for the district court's characterization of Carlson's testimony rings hollow because the only basis for the alternative conclusion that "Carlson's opinions are grounded in experience" was Carlson's naked assertion. Resp. Br. 35 n.33; Pet. Br. 28-31.

application of the *Daubert* factors. Resp. Br. 2; see *id.* at 20, 21, 35. But the court of appeals did not say that the district court erred in applying the *Daubert* factors automatically, to the exclusion of other reliability considerations. It said that the *Daubert* factors do not apply at all to "non-scientific expert testimony" and that the district court was wrong to categorize Carlson's testimony as scientific because he "makes no pretense of basing his opinion on any scientific theory" but rather "rests his opinion on his experience." JA 100-02. Accordingly, the court of appeals concluded that the "district court erred as a matter of law by applying [the] *Daubert* [factors] in this case." JA 102; see JA 104 (same).

Respondents fare no better in their attempt to recast the court of appeals' remand instructions. According to respondents, the court "remand[ed] the case for an assessment of the expert's reliability *in accordance with factors used in the expert's field*." Resp. Br. 16 (emphasis added); see also *id.* at 20, 22, 28. This suggests, incorrectly, that the court below *agreed* with respondents' principal argument here: that an expert's reliability should be evaluated by reference to "reliability standards prevailing within the expert's particular discipline." *Id.* at 24. But it is clear that the Eleventh Circuit did not have respondents' argument in mind because, as we explain later (at 7), respondents *never made* that argument below.

In any event, the remand instructions divined by respondents find no support in the Eleventh Circuit's opinion, which states:

> Aside from its *Daubert* related arguments, [Kumho] has presented this court with a number of potentially troubling criticisms of Carlson's alleged expertise and methodology, including his rendering of an opinion regarding the Carmichaels' tire before he had personally inspected its carcass. We leave * * * such matters to the discretion of the district court on remand.

JA 103 (footnote omitted). The only flaw the court mentioned — Carlson's "sentence first, verdict afterwards" methodology (Pet. Br. 48) — applies broadly, not just to tire failure analysis.

Because the court of appeals ruled that the *Daubert* factors were "inapplicab[le] * * * as a matter of law" (JA 103-04), we correctly framed the question presented as whether a trial judge "*[m]ay* * * * consider the four [*Daubert*] factors * * * in a Rule

702 analysis of [the] admissibility" of Carlson's testimony. Pet. i (emphasis added). Respondents are therefore wrong to claim that "the issue" before this Court is whether the district courts *must* consider the *Daubert* factors "and only them." Resp. Br. 28 n.26.[4]

3. Finally, respondents take aim at the argument — attributed to us — in favor of the "universal and automatic application" of the *Daubert* factors. See Resp. Br. 27; see also *id.* at 20, 23, 25, 37. But we never made such an argument. Our brief acknowledged that this Court had indicated that "all of the *Daubert* factors need not be applied," even to experts who testify on the basis of "scientific" knowledge (Pet. Br. 39); conceded that factors such as "publication or peer review" might not be probative with respect to certain experts (*ibid.*); and stated that the *Daubert* factors, properly understood, serve as "powerful general indicia of reliability for *many* types of expert testimony" (*id.* at 40 (emphasis added)). In addition, we stated that the question whether "the *Daubert* factors might not apply to certain types of experience-based expert testimony" is one that "need not be decided in this case." *Id.* at 28-29.

The *Daubert* factors, flexibly understood, are appropriate for evaluating whether *Carlson's methodology* is sufficiently reliable to warrant admission. Accord U.S. Br. 15, 24 (*Daubert* factors focus on "verification, publication, normalization, and acceptance" and "shed light on the reliability of Carlson's methods"). This case presents no occasion for this Court to decide whether the *Daubert* factors should be applied to every conceivable type of expert.

[4] Respondents' effort to rephrase the question presented also comes too late, because they did not suggest in their brief in opposition that the question required correction in this fashion. See S. Ct. R. 15.2. At the certiorari stage respondents framed the question presented as "[w]hether the Court of Appeals correctly held that Respondents' expert's opinions, which were based upon technical and specialized knowledge * * *, should not be submitted to a *Daubert* analysis," and defended as "correct[ ]" the Eleventh Circuit's holding "that Carlson's testimony was technical in nature, and thus, not subject to a *Daubert* analysis." Br. in Opp. i, 4.

C. Respondents' Proposed Approach Is Flawed And Provides No Basis For This Court To Rule In Their Favor

Respondents' principal argument is that the admissibility of Carlson's testimony should be judged based on "indicia of reliability drawn from the particular discipline at issue." Resp. Br. 15; see *id.* at 16, 23, 28, 48. Unfortunately, respondents never identify those "indicia" for the field of tire failure analysis, nor do they clearly explain whether the "appropriateness" of such field-specific reliability factors is to be determined solely on the basis of what others experts in the field believe (or instead, whether federal judges bring some independent judgment to bear in deciding what factors are "appropriate"). In an argument suggestive of the first alternative, respondents assert that "all three tire failure analysis experts" in this case "used the same methodology" and further contend that this "agreement" is "a strong indicium of reliability where no other record evidence contradicts it." *Id.* at 39-41. For a variety of reasons, respondents' approach is seriously flawed and of no help to them in this case.

1. *Waiver*. Respondents' new-found approach was neither raised in, nor decided by, the courts below. Respondents argued below that (1) the *Daubert* factors were inapplicable because Carlson's testimony was technical rather than scientific and was based on "experience"; and (2) Carlson's methodology satisfied the *Daubert* factors. See JA 14-18, 48, 54-55, 64-75; Resp. C.A. Br. 13-25, 38-45. They never suggested that Carlson's testimony should be evaluated based solely on "indicia of reliability drawn from the particular discipline at issue." Resp. Br. 15.[5] Respondents' argument has thus been waived, and this Court should not consider it. See *United States* v. *Williams*, 504 U.S. 36, 40-45 (1992).

[5] Respondents did argue in the district court that Carlson's testimony should be admitted because, in addition to being "testable and refutable" and having been "exposed to peer review," it was "commonly accepted" among other tire failure analysts. JA 69-71, 74. But this argument was designed to show that Carlson's testimony should be admitted as reliable under all of the *Daubert* factors, not that his testimony should be tested for reliability under a standard different from *Daubert*.

2. *Divergence From* Daubert *Factors Purely Conjectural*. It is unclear that respondents' discipline-specific approach would yield a list of considerations that excludes the *Daubert* factors. As respondents admit (at 21 n.21), if this case were returned to the district court and they were given a second chance to marshal evidence about what "reliability standards prevail[ ]" (*id.* at 24) in the field of tire failure analysis, the district court might still conclude that reliability in this field depends, in part, on whether a technique has been or can be tested (or is instead subjective), has been published or subjected to peer review, has a low error rate (or instead a low degree of accuracy), and is generally accepted as valid by other tire failure analysts. Thus, respondents' suggested approach might not result in abandonment of even a single *Daubert* factor.[6]

3. *Respondents' Effective Endorsement Of "General Acceptance" As An Indicium Of Reliability*. As we have explained, the "general acceptance" factor is properly understood in some cases as signifying "a threshold through which novel techniques pass on their way to acceptability (as under the *Frye* test)." Pet. Br. 43. In other cases, however, this factor targets more broadly "the extent to which a technique in all of its particulars is used by experts in a certain field." *Ibid.* Respondents fail to suggest any reason why this broader understanding of the *Daubert* "general acceptance" test, which has been widely adopted by the lower courts, is problematic; in fact, they expressly urged such an understanding in the district court (JA 71-74) and implicitly do so again here. See Resp. Br. 31 (stating that "general acceptance" factor "may be relevant to determining reliability in *mature*

[6] Respondents say (at 21 n.21) that it is "unlikely" that any of the *Daubert* factors would be applied, but their unsupported prognostication contradicts arguments they made below (see JA 51, 64-74) and is at odds with their arguments in this Court. For example, as explained more fully in text, respondents themselves effectively agree that "general acceptance" is pertinent by arguing that the supposed similarity in methodologies used by Carlson, Edwards and Dodson is "a strong indicium of reliability" in this case. Resp. Br. 39. As for testing, respondents also admit that "whether chemical tests are ordinarily used in tire failure analysis" to test hypotheses or verify conclusions might prove to be a relevant consideration. *Id.* at 29.

disciplines where techniques and methods are widely known") (emphasis added). In fact, respondents' only example of what their proposed approach would mean — an inquiry into whether Carlson's methodology is accepted by other tire failure analysts — amounts to an endorsement of the *Daubert* "general acceptance" factor.[7]

As previously noted, respondents' brief never makes clear whether, under their proposed approach, the "appropriateness" of field-specific reliability factors is to be determined solely by reference to the views of other experts in the field. If that is respondents' argument, then their approach closely resembles a plea for the *exclusive* use of the "general acceptance" factor. While we agree that "general acceptance" is certainly relevant in determining the reliability of Carlson's testimony, the *exclusive* use of this factor would be problematic. It would ignore the possibility that an entire field of "expertise" might be unreliable.[8] Such an approach, for example, would permit a palm reader who adheres to the standards governing chiromancy to testify regarding a party's fortune. It would also permit an astrologer to testify regarding future lost earnings. To avoid such results, the reliability of an expert's methodology must be evaluated not just by reference to the

[7] In criticizing the district court's application of the *Daubert* factors to Carlson, respondents never say that the "general acceptance" factor was *inappropriate* for judging the reliability of Carlson's testimony. See Resp. Br. 31-32. Rather, they fault the district court for "*requir[ing]* satisfaction of this [factor in order] to establish reliability." *Id.* at 31 (emphasis added). But as we previously explained (at 3-4 & n.2), this argument is specious: the district court never regarded the satisfaction of any particular *Daubert* factor as a precondition to admissibility.

[8] Experience teaches that this possibility is very real. See, *e.g.*, *Sterling* v. *Velsicol Chem. Corp.*, 855 F.2d 1188, 1208-09 (6th Cir. 1988) (rejecting as unreliable expert testimony in field of "clinical ecology"); *Mercado* v. *Ahmed*, 974 F.2d 863 (7th Cir. 1992) (same for economist's testimony concerning "hedonic" damages); see also *Paley* v. *Federal Home Loan, Mortgage Corp.*, 1994 U.S. Dist. LEXIS 9243, at *11-*12 (E.D. Pa. July 6, 1994) (excluding testimony of expert on "business ethics" who proposed to testify about corporate party's bad faith). See generally P. HUBER, GALILEO'S REVENGE 57-74, 92-110 (1991).

standards accepted in a specific field. It must also be judged by broader external indicia of reliability and validity (such as whether it yields accurate results and is subjective in nature) as well as by measures of internal consistency and coherence (see *Joiner*, 118 S. Ct. at 518-19; Pet. Br. 21-22).[9]

4. *Respondents' Inability To Prevail Under Their Own Standard.* Endorsement of respondents' approach still would not change the outcome in this case in the district court. That court *rejected as unsupported by the record* respondents' factual assertion that Carlson's methodology was identical to Edwards's and Dodson's, and that ruling was not an abuse of discretion. In addition, the sparse record that respondents created on this issue demonstrates that Carlson's methodology was in fact *dissimilar* to Dodson's.

a. Respondents maintain that the district court "accorded no significance to [their] argument that Defendants' expert, Thomas Dodson, had engaged in the same tire failure analysis as Carlson." Resp. Br. 13 (citing JA 41). But the district court did not overlook or ignore respondents' comparison of the Carlson and Dodson methodologies; it demolished that inapt comparison.

The district court stated that it "cannot conclude from the record before it that Carlson's analysis is generally accepted in the relevant scientific community." JA 40. And, "[alt]hough the plaintiffs claim that * * * Dodson[ ] uses the same method of analysis * * * , *the excerpted portions of Dodson's deposition * * * lend no support to this contention.*" JA 40-41 (emphasis added); see JA 41 ("simply no evidentiary basis" for the claim of similarity). With their motion for reconsideration, respondents submitted additional pages of Dodson's deposition transcript, but the court again declined to find that "the methodology and principles adopted by

[9] Whether respondents intend to endorse "general acceptance" as the exclusive reliability factor or as only one of many, their approach would provide no basis on which to affirm the judgment of the court of appeals. The Eleventh Circuit held that it was error to apply *any* of the *Daubert* factors to Carlson's testimony, including the "general acceptance" factor. JA 102. If the court of appeals' judgment were affirmed, the district court would be barred from considering on remand a factor that respondents now contend is highly relevant.

Carlson are widely accepted in the relevant community" (JA 93). It explained (JA 93-94 (emphasis added)):

> The cited testimony indicates only that both experts adopted the basic techniques of collecting data. It says nothing about the component of Carlson's tire failure analysis which most concerned the Court, namely, the *methodology* employed by the expert *in analyzing the data obtained in the visual inspection, and the scientific basis, if any, for such an analysis*. There is no evidence whatsoever that the parties' experts agree on the proper analytical framework to be employed in assessing data obtained from a visual inspection of a tire.

That finding was not clearly erroneous.[10]

b. Respondents in any event are wrong in asserting that the record shows that "all three tire failure analysis experts" in this case "used the same methodology." Resp. Br. 40.

Respondents emphasize that each expert relied on "visual observation." Resp. Br. 40. It is hardly surprising that each expert *looked* at the failed tire (or in Carlson's case, photographs of the tire) before rendering an opinion, but that fact shows no shared "methodology." The record demonstrates, moreover, that Carlson's way of looking at the tire was markedly different from Dodson's and even Edwards's. Carlson did not conduct a visual and *tactile* examination on the tire itself until after he rendered his opinion. Pet. Br. 6, 8.[11] Probably for that reason, Carlson failed to

[10] The district court correctly noted that "tire-failure testimony" that was "similar" to Carlson's had been routinely excluded as unreliable by other courts. JA 93 (citing cases); see also Br. of Rubber Mfrs. Ass'n, at 23-25 (discussing cases). The cases cited by respondents (Br. 43-44 n.41) virtually all pre-date *Daubert*.

[11] Compare JA 430 (Dodson), 332 (Edwards). Respondents suggest that the timing of Carlson's examination is unimportant, but he unequivocally testified that his opinion was based "totally on the photographs" and on nothing else. JA 245; Pet. Br. 5-6. That unequivocal testimony soundly refutes respondents' assertion (Br. 41) that in formulating his opinion, Carlson relied on "documentary evidence" as well as on consultations with Edwards. See note 14, *infra*. Not until the morning of his deposition did

detect a second, improperly filled puncture at the very place on the tire where the separation began. *Id.* at 10. Carlson's pre-opinion *visual* examination was limited to looking at photographs and did not include any direct viewing of the tire itself. *Id.* at 6.[12] When Carlson got around to conducting a visual and tactile examination of the tire, he devoted *one hour* to examining all four tires on the vehicle in respondents' lawyers' offices. *Id.* at 6, 49-50.[13]

Carlson not only employed a different data-gathering technique, but also drew conclusions from his observations in a dissimilar way. Respondents claim that Dodson "performed an evaluation designed to determine only *whether* the tire failure was caused by abuse or *a* defect, not to identify a specific defect." Resp. Br. 3-4 (emphasis in original). But the excerpts of Dodson's deposition that were placed in the record (JA 408-11, 425-29) and Dodson's report (JA 430-35) lend no credence to respondents' claim that Dodson's analysis was so limited. The record established that Dodson carefully examined the tire for evidence of a defect. JA 430-35. He "found no defects" but did observe unmistakable evidence that the tire failed "due to prolonged overdeflected operation with intracarcass pressurization." JA 432. This evidence "includ[ed] very severe bead compression grooves, bluish discoloration of the rubber due to oil migration, accelerated tread shoulder rib wear," an "abraded puncture hole which had been patched," and "[b]are polyester body cords" that "indicated intra-carcass pressurization in the tire structure." JA 432. Nothing

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Carlson review the maintenance records, the accident report, several short witness statements, and the tire itself. See JA 243-49.

[12] Respondents suggest that, because Dodson took photographs of the failed tire, he used a methodology similar to Carlson's. But Dodson's photographs were taken merely to "document [his] observations" (JA 435), not (as in Carlson's case) as a substitute for visual inspection.

[13] Edwards and Dodson, in contrast, both examined the failed tire in their laboratories. JA 332, 426; see also Br. of Rubber Mfrs. Ass'n, at 26 ("Examinations should be conducted in properly equipped facilities with appropriate lighting and the necessary tools."). Moreover, in contrast to Carlson's brief examination, Dodson devoted the better part of a day and a half to examining the failed tire. JA 426.

in the record indicates that Dodson agreed with or applied Carlson's process-of-elimination methodology or novel "two-factor" rule of thumb.

Edwards's report (submitted before he withdrew from this case) also does not endorse a process-of-elimination methodology or Carlson's "two-factor" rule of thumb. See JA 332-33. Far from examining the four indicia of abuse considered by Carlson, the report suggests that the tire had not been operated overloaded or underinflated solely on the basis of a lack of abnormal rim flange impressions. JA 333.[14] Carlson's methodology was not shared by Dodson or even Edwards — the record shows just the opposite.

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[14] After Carlson's exclusion, respondents submitted an affidavit of Edwards in support of their motion for reconsideration. JA 419-22. Petitioners moved to strike, arguing that respondents were not entitled to submit new evidence under Fed. R. Civ. P. 60(b). See Motion of Defendants To Strike, at 1-2 (Apr. 23, 1996). The district court never ruled on this motion, but there is no indication in its order that it considered the Edwards affidavit. See JA 88-94.

Even if this Court were to consider Edwards's affidavit, that document provides no support for respondents' claim that Edwards and Carlson used the same methodology. Far from merely ruling out abuse to reach the conclusion that the cause of the blowout was a defect, Edwards stated that the "principals [*sic*] of failure analysis" required him to "analyze[ ] and evaluate[ ]" "*all* possible causes of the failure." JA 419-20 (emphasis added). Nowhere did Edwards say that he used Carlson's two-factor rule of thumb. On the contrary, Edwards *presumed* in his affidavit that the tire failed due to defect based on the assumption (contradicted by Carlson, see JA 293-94) that the failure occurred during normal use before the end of the tire's useful life. See JA 421. Such a presumption is not allowed under Alabama law. See *Sears, Roebuck & Co.* v. *Haven Hills Farm, Inc.*, 395 So. 2d 991, 995 (Ala. 1981). We note, moreover, that Edwards's statement in his affidavit that he reviewed his "empirical data, analytic method, * * * conclusions," and "the results of [his] own testing" with Carlson before Carlson was deposed (JA 421-22), which respondents emphasize (Br. 41), is contradicted by Carlson's sworn testimony. JA 244-45.

D. Respondents Fail To Show That The Remaining *Daubert* Factors Are Immaterial To Assessing Carlson's Reliability

Although respondents effectively admit that the "general acceptance" criterion could and should have been applied below, they disagree with the district court's decision to apply the remaining three *Daubert* factors. Their arguments are unpersuasive.

1. *Testing*. This factor, properly understood, concerns whether an expert's methodology is susceptible to substantiation or objective validation — or instead is purely "subjective" in nature. Pet. Br. 40-41. The lower courts have applied this factor flexibly. For example, in product liability actions involving design defect claims, courts have frequently considered whether expert engineers have "tested" their proposed alternative designs. *Id.* at 40. In this case, the district court found that Carlson's methodology was not subject to testing but rather was largely subjective in nature, and concluded that this characteristic weighed against a determination that Carlson's methodology was reliable. JA 37-38. Real-world corroboration of the predictions of an expert's methodology should be a factor that determines its reliability and, hence, admissibility.

Respondents cannot bring themselves to say that it is *immaterial* whether Carlson's methodology was susceptible to substantiation. Instead, they lodge the abstract complaint that "subjectivity itself is not a *universal* basis upon which to *exclude*" expert testimony. Resp. Br. 29 (emphasis added). We never suggested otherwise. The question is not whether subjectivity alone could be a basis for exclusion; it is whether it is one relevant factor that a trial court may consider. Surely it is. See Proposed FRE 702 adv. comm. note (Resp. Br. 22a) ("The more subjective and controversial the expert's inquiry, the more likely the testimony should be excluded as unreliable."); Br. of Nat'l Acad. Eng'g 17 ("the extent to which an expert's methodology relies on subjective interpretation" is an "appropriate" consideration in evaluating the reliability of "engineering testimony"). Nor is this case about "universal" application of the testing factor; the issue is whether the district court abused its discretion in applying that factor to an engineer such as Carlson.

Respondents do not argue that testing is inapplicable to tire failure analysis — an argument that is soundly refuted by several

of the engineering groups that have filed *amicus* briefs in this case. See Br. of Nat'l Acad. Eng'g 14-15 (explaining that, "just as in science, the testing of hypotheses is central to the development of an understanding of the mechanism of failure"); Br. of Allen *et al.*, at 10-12, 24, 27-28; Br. of Bobo *et al.*, at 22-23; see also Br. of Rubber Mfrs. Ass'n, at 17-18, 25-27. Since testing is an ordinary part of tire failure analysis (*i.e.*, what such experts do), under respondents' suggested approach it is an appropriate indicium of reliability. In the trial court, respondents argued that Carlson's methodology was, in fact, both "testable and refutable." JA 69; see also JA 70.

2. *Publication or Peer Review*. This *Daubert* factor focuses on whether the witness or other experts have endorsed the methodology in a published or peer-reviewed writing. See Pet. Br. 41-42. By defending a methodology in writing, an expert places his reputation on the line and opens up his techniques to informed criticism by other experts — criticism that may uncover flaws. If a publication has been peer-reviewed, that provides further evidence of a method's reliability.[15] "Peer review" is broad enough to encompass independent professional evaluations outside of the publication process. See *id.* at 42 (citing authorities). In applying this factor, the district court noted that "Carlson concedes that there are no publications or papers which have approved or otherwise discussed his techniques for tire failure analysis" and it counted this as a factor weighing against admissibility. JA 38-39; see also JA 92-93.

Respondents say that "[r]outine" application of this factor is "hazardous." Resp. Br. 30. They point out (*ibid.*) that this Court in *Daubert* stated (as we acknowledged, Pet. Br. 39) that in some circumstances the absence of publication will not demonstrate unreliability. Yet the question is not whether the publication or peer review factor applies to every expert witness, but whether it

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[15] Respondents make no effort to dispute that there are scores of peer-reviewed journals in the field of engineering. See Br. of Allen *et al.*, at B-1 to B-6 (setting forth selected list of 149 peer-reviewed engineering journals); Br. of Nat'l Acad. Eng'g 15-16 n.12 (stating that the "three largest engineering societies" alone "together publish more than 100 peer-reviewed technical journals").

was *irrelevant* — as the Eleventh Circuit held — to evaluating the reliability *of Carlson's methodology*. On that question, respondents suggest that publication might not be an appropriate consideration because "much of tire [failure] analysis is performed by manufacturers, such as Michelin, for which Carlson earlier worked, and * * * the[ir] methods *may* have been proprietary and, therefore, never published." Resp. Br. 30 n.28 (emphasis added); see also *id.* at 44 n.42. They fault the district court for failing to evaluate this "evidence" concerning "accepted practices in this field." *Id.* at 30.[16]

The record does not support this argument (see note 16, *supra*), but in any event respondents never made it below. They never suggested that publication was not probative of reliability because Carlson's methodology was a closely guarded commercial secret or valuable proprietary information (an implausible claim on its face). In fact, respondents contended in the district court that Carlson's testimony *had* been exposed to "peer review." JA 71. The district court correctly rejected Carlson's suggestion that review by lay jurors qualified as "peer" review. JA 92-93 ("the fire of litigation is not * * * conducive to careful, well-reasoned, scholarly analysis, critique, and review"). The district court also noted that "similar tire-failure analysis has not fared well" in the courts. JA 93 (citing cases that excluded such testimony as unreliable).[17]

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[16] The only record "evidence" cited by respondents for this "accepted practice" in the tire "industry" is Carlson's testimony that he *personally* had not published much *during his employ at Michelin* because Michelin is "a secret company" that "didn't want anything published." JA 178. This hardly proves that *all* companies in this industry forbid publication, much less that such constraints prevent publication by independent contractors or academics. Indeed, Carlson testified that at the time of the deposition he was working on several papers he intended to publish. JA 176-78.

[17] Respondents do not deny that, in the words of one group of distinguished engineers appearing here as *amici*, "[p]eer review plays, if anything, a greater role in engineering than in the pure sciences." Br. of Allen *et al.*, at 25; see JA 71.

3. *Error Rate/Existence or Maintenance of Standards Controlling the Methodology*. This factor focuses on the accuracy of a technique and its adherence to accepted standards. See Pet. Br. 42-43. As the district court noted, respondents below did not dispute that this factor, if properly applied to Carlson, "operates against admissibility in this case." JA 92 n.2. Yet respondents now fault the district court for being "unaware" of what they say is "substantial authority recognizing that error rates cannot be readily assessed in a wide range of disciplines." Resp. Br. 31.[18] Respondents cannot bring themselves to say that tire failure analysis is one of these disciplines in which error rates cannot be "readily" discovered.

According to respondents, the error-rate factor is "of dubious value in determining reliability absent evidence that such information is available to other tire failure analysts." Resp. Br. 31. This is a non sequitur. Respondents never explain why the relevance of error-rate evidence should hinge on how widely known it is in a field. Under respondents' approach, as long as most tire failure analysts remain unaware that a certain technique is 99% inaccurate, a court may not consider error rate in evaluating reliability. This *Daubert* factor was properly considered by the district court. See Br. of Nat'l Acad. Eng'g 16 (stating that the error rate "bears directly" on a "technique's validity within the engineering discipline"); Br. of Allen *et al.*, at 26 (same).[19]

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[18] Of course, if the district court was unaware of this evidence, it is because respondents neglected to present it. In addition, we note that the "substantial authority" cited by respondents (Br. 31 n.30) consists of (1) a case (*Compton* v. *Subaru*) whose basic holding respondents have repudiated in this Court, and (2) an inapposite rhetorical question posed in a law review article.

[19] See also Br. of Nat'l Acad. Eng'g 16-17 & n.13 (explaining widespread use of design and testing standards by engineers); Br. of Bobo *et al.*, at 20, 37 (listing ASTM tests of tire components). Although respondents criticize the district court (Br. 13, 32) for rejecting as "of dubious merit" six additional reliability factors cited in their motion for reconsideration (see Pet. Br. 14 n.8), they fail to make any argument why those factors were in fact appropriate. That is not surprising, since the six factors are not "indicia of reliability drawn from the particular discipline"

E. Respondents' Procedural Arguments Are Not Properly Presented And In Any Event Are Wrong

Respondents ask this Court to hold that the proponent of expert testimony must establish only a "*prima facie* case of reliability based on th[e] record evidence," at which point the burden shifts to the opposing party to produce evidence showing "that the expert failed to apply recognized methodologies or principles in the discipline to reach his or her opinion." Resp. Br. 16; see also *id.* at 38. The Court should reject this invitation, because the question of what procedures should govern the *Daubert* inquiry is not properly presented and because respondents' argument is meritless.

1. Respondents' novel procedural argument is not fairly included in the question presented and was neither raised in, nor decided by, the courts below. It is not this Court's practice to reach such issues. See page 7, *supra*. In addition, respondents' argument is purely hypothetical, because on this record they could not prevail even under the more lenient standard they propose. The district court correctly found that "there is *no evidence whatsoever*" that the experts for both parties "agree on the proper analytical framework" for tire failure analysis. JA 93 (emphasis added); see pages 10-11, *supra*. The district court saw no reason even to hold a "Rule 104(a) evidentiary hearing." JA 33 n.4. Thus, respondents failed to establish even a "*prima facie*" case of reliability.

2. If this Court reaches respondents' procedural argument, it should reject it. Rule 104(a) of the Federal Rules of Evidence states that "[p]reliminary questions concerning * * * the admissibility of evidence shall be determined by the court." This Court's "prior decisions regarding admissibility determinations that hinge on preliminary factual questions * * * have traditionally required that these matters be established by a preponderance of proof." *Bourjaily* v. *United States*, 483 U.S. 171, 175 (1987); see Pet. Br. 26. In *Daubert*, this Court made clear that the same standard applies to questions about the reliability of expert testimony. See 509 U.S. at 592-93 & n.10 (same). As proponents of Carlson's testimony, respondents thus bore the burden of proving by a

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of tire failure analysis (Resp. Br. 15).

preponderance of the evidence that his testimony was sufficiently reliable to be admitted.

Respondents fail to acknowledge this settled principle of law. They argue for a change in the law under which "the proponent of the expert testimony" is required to establish only "a *prima facie* case of reliability." Resp. Br. 38; see also *id.* at 16. Under that approach, the proponent could win admission of expert testimony without showing reliability by the requisite preponderance of the evidence, if the opponent fails to carry its burden of production. But respondents offer no good reason why this Court should reverse its precedents in order to adopt their proposed procedural innovation.[20] They nowhere explain why it makes any sense to require the opponent of an expert, rather than the expert's sponsor, to marshal evidence about what other experts typically do in the field. Neither do respondents explain why the opponent should be required to produce evidence concerning other factors that bear on reliability (including the remaining *Daubert* factors). And respondents fail to grapple with the substantial likelihood that their cumbersome procedural framework will spawn wasteful satellite litigation, as courts attempt to sort out how much is enough for a "*prima facie*" case of reliability and when the opponent has met its burden of production. See EXPERT EVIDENCE: A PRACTITIONER'S GUIDE TO LAW, SCIENCE, AND THE FJC MANUAL 67-68 (B. Black & P. Lee, eds. 1997).

Respondents' procedural argument is a desperate effort to excuse their failure, in the district court, to satisfy Rule 104(a) and *Bourjaily* by demonstrating that Carlson's testimony is reliable. There is no reason why a new and meritless argument raised for the first time in this Court should give them another chance to do so.

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[20] Respondents twice quote a lengthy passage from *DePaepe* v. *GMC*, 141 F.3d 715 (7th Cir. 1998), which they say recognizes the "burden placed on the *opponent* of expert testimony" to demonstrate the lack of reliability. Resp. Br. 38-39 & n.36 (emphasis added); *id.* at 34-35. In fact, as the language respondents omit from the passage (*id.* at 35, 39) shows, the "burden" at issue was that of a "litigant that wants a *court of appeals* to *set aside* a district judge's *decision to admit* expert testimony" under the "deferential" standard of review. 141 F.3d at 719-20 (emphasis added).

F. This Court Should Affirm The District Court's Ruling

In our opening brief (at 5-11, 33-35, 47-50), we explained why the district court was correct in concluding that Carlson's testimony was wholly unreliable and should be excluded. In addition to flunking all four *Daubert* factors, Carlson's testimony had a number of features that strongly suggested unreliability. Carlson made his living from selling expert testimony to plaintiffs; he adopted the report of his employer *verbatim*; and he formed his opinion about the cause of the tire's failure without first bothering to physically examine the tire. *Id.* at 4-6, 48-50. When Carlson finally conducted his cursory examination (on the morning of his deposition), he failed to discover a second, inadequately filled puncture precisely where the separation began. *Id.* at 8, 10, 48-50.

Carlson's expert report, moreover, contained a number of egregious mistakes, including an inaccurate description of how much tread remained on the failed tire (a factor plainly relevant to abuse) and a mistaken conclusion about the specific nature of the "defect" he had discerned in the photographs of the tire — mistakes that Carlson repeated (and expanded upon) in a sworn affidavit submitted to the trial court after he acknowledged these errors in his sworn deposition. Pet. Br. 5-7, 49. And Carlson failed to consider reams of evidence that might have shown that there was no design or manufacturing defect in the tire. *Id.* at 10-11, 50. In fact, Carlson substantially departed from his usual methodology and concocted a novel technique that seemed calculated to allow him to magically conclude, on the basis of *some* evidence of all four "indicia" of abuse and *no* evidence of a defect, that the tire had failed because of a defect. *Id.* at 18, 34, 49-50 & n.20. The district court properly rejected Carlson's testimony as unreliable. Respondents' efforts (Br. 40-43 & nn.37, 40) to quibble with various details relating to Carlson's testimony do not even approach the requisite showing that the district court abused its discretion in excluding that testimony.

CONCLUSION

The judgment of the court of appeals should be reversed.

Respectfully submitted.

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